Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. **(Currently Amended)** In a telephone network connecting a first subscriber end point to a second subscriber ~~endpoint~~ <u>end point</u> by a signal transmission channel having a digital channel portion, a method of determining properties of said signal transmission channel, <u>said method comprising</u>:

    sending a digital probing signal from a first subscriber terminal connected to said first subscriber end point to a second subscriber terminal, connected to said second subscriber end point, said digital probing signal having a sequence of probing frames, each probing frame having at least ~~one frame portion~~ <u>two frame portions</u>, each frame portion having ~~a preset number~~ <u>the same preset number</u> of digital symbols, each digital symbol having [[a]] <u>one</u> sign bit and [[a]] <u>one</u> data bit, wherein absolute digital values of [[the]] <u>all</u> symbols in the frame portions are equal, and wherein a value of the sign bit changes with every adjacent frame portion,

    receiving, at said second subscriber terminal, a received signal resulting from having transmitted said digital probing signal through said signal transmission channel;

    comparing said received signal with said digital probing signal to distinguish between possible channel configurations of said signal transmission channel; and

    transmitting a response signal from said second subscriber terminal to said first subscriber terminal, said response signal carrying information indicative of a result of comparing said received signal with said digital probing signal.

2.   **(Original)** The method according to claim 1, wherein sending a digital probing signal comprises setting all data bits of each symbol of a probing frame to have the same logical value.

3.   **(Original)** The method according to claim 1, wherein sending a digital probing signal comprises setting the total number of symbols of a probing frame to be greater than the number of symbols in an impulse response of a digital impairment of the signal transmission channel.

4.   **(Original)** The method according to claim 3, wherein setting the total number of symbols of a probing frame further comprises selecting the total number of symbols per probing frame to be 80.

5.   **(Currently Amended)** A subscriber terminal connected to a subscriber end point of a telephone network having a plurality of subscribers, said subscriber terminal comprising:

a connection between said subscriber terminal and a subscriber end point, said subscriber end point being connected to the telephone network by a digital channel portion, and

a probing signal transmitter for sending, to a second subscriber terminal to which a signal transmission channel has been established, a digital probing signal having a sequence of probing frames, each probing frame having at least one frame portion two frame portions, each frame portion having a preset number the same preset number of digital symbols, each digital symbol having [[a]] one sign bit and data bits one data bit, wherein absolute digital values of [[the]] all symbols in the frame portions are equal, and wherein the value of the sign bit changes with every adjacent frame portion.

6.   **(Currently Amended)** The subscriber terminal of claim 5, wherein one bit position of said at least one pulse digital symbol changes value with every other frame.

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7.   **(Original)** The subscriber terminal of claim **6**, wherein said one bit position is the position of the sign bit.

8.   **(Currently Amended)** The subscriber terminal of claim **5**, wherein the number of equal symbols per frame is ~~significantly~~ higher than the number of ~~pulse~~ digital symbols.

9.   **(Currently Amended)** The subscriber terminal of claim **5**, wherein there is one ~~pulse~~ digital symbol per frame.

10.   **(Currently Amended)** The subscriber terminal of claim **5**, wherein there are two ~~pulse~~ digital symbols per frame.

11.   **(Original)** The subscriber terminal of claim **5**, wherein the total number of symbols per frame is 80.

12.   **(Currently Amended)** A telephone network comprising:

     a connection between a subscriber end point of said telephone network and a first subscriber terminal, said subscriber end point being connected to the telephone network by a digital channel portion, <u>and</u>

     a probing signal transmitter for sending, to a second subscriber terminal to which a signal transmission channel has been established, a digital probing signal having a sequence of frames, each frame having a sequence of digital symbols, <u>the sequence including the same preset number of digital symbols</u>, each symbol having ~~a plurality of bits~~ <u>one sign bit and one data bit</u>, wherein digital values of all symbols over all frames are equal except for one bit position of each symbol, the value of which changes with every other frame.

13.   **(Currently Amended)** A telephone network comprising:

a connection between a subscriber end point of said telephone network and a first
subscriber terminal, said subscriber end point being connected to the telephone
network by a digital channel portion,

a probing signal transmitter for sending, to said second subscriber terminal, a digital
probing signal having a sequence of frames, each frame having a sequence of digital
symbols, <u>the sequence including the same preset number of digital symbols,</u> each
symbol having a ~~plurality of bits~~ <u>one sign bit and one data bit</u>, wherein digital values
of all symbols are equal except for at least one symbol of each frame having a
~~significantly~~ different digital value compared to the remaining equal values.